IN THE CLAIMS:

C1

6. (Amended) The isolated polynucleotide molecule of claim 1, which further incorporates a heterologous sequence from RSV.

C2

8. (Amended) The isolated polynucleotide molecule of claim 1, which further incorporates a heterologous sequence from measles virus.

C3

11. (Amended) An isolated polynucleotide molecule comprising an operably linked transcriptional promoter, a polynucleotide sequence encoding a human or bovine PIV genome or antigenome, and a transcriptional terminator, wherein said polynucleotide sequence encoding said PIV genome or antigenome is modified by a nucleotide insertion, rearrangement, deletion or substitution.

C4

16. (Amended) The isolated polynucleotide molecule of claim [15] 11, wherein said polynucleotide sequence encoding said PIV genome or antigenome encodes at least one attenuating amino acid substitution in the polymerase L protein.

C5

19. (Amended) The isolated polynucleotide molecule of claim [28] 18, wherein the amino acid substitution in the N protein occurs at a position corresponding to residues Val96 or Ser389 of JS cp45.

C6

48. (Amended) A cell or cell-free composition including an expression vector which comprises an isolated polynucleotide molecule encoding a human or bovine PIV genome or antigenome and an expression vector which comprises one or more isolated polynucleotide molecules that encode(s) N, P and L proteins of PIV, whereby expression of said PIV genome or antigenome and N, P, and L proteins yields an infectious PIV particle.

C7

52. (Amended) A method for producing an infectious PIV particle from one or more isolated polynucleotide molecules encoding said PIV, comprising:

coexpressing in a cell or cell-free system an expression vector which comprises a polynucleotide molecule encoding a human or bovine PIV genome or antigenome and an

C7 Cont.

expression vector which comprises one or more polynucleotide molecules encoding N, P and L proteins, thereby producing an infectious PIV particle.

C8

59. (Amended) The method of claim 52, wherein the polynucleotide molecule encoding the PIV genome or antigenome is a human[, bovine or murine] PIV sequence.

C9

68. (Amended) The method of claim [67] 52, wherein the polynucleotide molecule encoding the PIV genome or antigenome incorporates [the] an amino acid substitution in the polymerase L protein [occurs] at a position corresponding to Tyr942, Leu992, or Thr1558 of JS cp45.

Sub. ED C10

91. (Amended) An isolated infectious PIV particle which comprises a recombinant human or bovine PIV genome or antigenome, a N protein, a P protein, and a L protein.

C11

110. (Amended) The isolated infectious PIV particle of claim [129] 97, wherein said chimeric genome or antigenome incorporates multiple mutations each specifying a phenotype selected from attenuation, temperature-sensitivity, cold-adaptation, small plaque size, or host range restriction.

C12

132. (Twice Amended) The isolated polynucleotide molecule of claim 129, wherein the isolated polynucleotide encoding the chimeric PIV genome or antigenome further incorporates [a full complement of attenuating mutations present in JS cp45, said full complement of] mutations comprising i) substitutions specifying a replacement of His for Tyr942, Phe for Leu992, and Ile for Thr1558 in the polymerase L protein; ii) substitutions specifying a replacement of Ala for Val96 and Ala for Ser389 in the N protein; iii) a substitution specifying a replacement of Thre for Ile96 in the C protein [(v)] iv) mutations in a 3' leader sequence comprising a T to C change at a position corresponding to nucleotide 23 of JS cp45, a C to T change at nucleotide 24, a G to T change at nucleotide 28, and a T to A

C12 cont.

change at nucleotide 45 of JS cp45; and [(vi)] v) a mutation in an N gene start sequence comprising an A to T change at a position corresponding to nucleotide 62 of JS cp45.

C13

134. (Twice Amended) The isolated polynucleotide molecule of claim 133, wherein said chimeric genome or antigenome incorporates [a full complement of attenuating mutations present in JS cp45, said full complement of] mutations comprising i) substitutions specifying a replacement of His for Tyr942, Phe for Leu992, and Ile for Thr1558 in the polymerase L protein; ii) substitutions specifying a replacement of Ala for Val96 and Ala for Ser389 in the N protein; iii) a substitution specifying a replacement of Thre for Ile96 in the C protein [(v)] iv) mutations in a 3' leader sequence comprising a T to C change at a position corresponding to nucleotide 23 of JS cp45, a C to T change at nucleotide 24, a G to T change at nucleotide 28, and a T to A change at nucleotide 45 of JS cp45; and [(vi)] v) a mutation in an N gene start sequence comprising an A to T change at a position corresponding to nucleotide 62 of JS cp45.

C14

136. (Twice Amended) The method of claim 135, wherein said genome or antigenome incorporates [a full complement of attenuating mutations present in JS cp45, said full complement of] mutations comprising i) substitutions specifying a replacement of His for Tyr942, Phe for Leu992, and Ile for Thr1558 in the polymerase L protein; ii) substitutions specifying a replacement of Ala for Val96 and Ala for Ser389 in the N protein; iii) a substitution specifying a replacement of Thre for Ile96 in the C protein [(v)] iv) mutations in a 3' leader sequence comprising a T to C change at a position corresponding to nucleotide 23 of JS cp45, a C to T change at nucleotide 24, a G to T change at nucleotide 28, and a T to A change at nucleotide 45 of JS cp45; and [(vi)] v) a mutation in an N gene start sequence comprising an A to T change at a position corresponding to nucleotide 62 of JS cp45.

C15

140. (Twice Amended) The isolated infectious PIV particle of claim 137, wherein the isolated polynucleotide encoding the chimeric PIV genome or antigenome further incorporates [a full complement of attenuating mutations present in JS cp45, said full complement of] mutations comprising i) substitutions specifying a replacement of His for Tyr942, Phe for Leu992, and Ile for Thr1558 in the polymerase L protein; ii) substitutions

specifying a replacement of Ala for Val96 and Ala for Ser389 in the N protein; iii) a substitution specifying a replacement of Thre for Ile96 in the C protein [(v)] iv) mutations in a 3' leader sequence comprising a T to C change at a position corresponding to nucleotide 23 of JS cp45, a C to T change at nucleotide 24, a G to T change at nucleotide 28, and a T to A change at nucleotide 45 of JS cp45; and [vi)] v) a mutation in an N gene start sequence comprising an A to T change at a position corresponding to nucleotide 62 of JS cp45.

C15 cont.

141. (Twice Amended) The isolated infectious PIV particle of claim 111, wherein said chimeric PIV genome or antigenome further incorporates [the full complement of attenuating mutations present in JS cp45, said full complement of] mutations comprising i) substitutions specifying a replacement of His for Tyr942, Phe for Leu992, and Ile for Thr1558 in the polymerase L protein; ii) substitutions specifying a replacement of Ala for Val96 and Ala for Ser389 in the N protein; iii) a substitution specifying a replacement of Thre for Ile96 in the C protein [(v)] iv) mutations in a 3' leader sequence comprising a T to C change at a position corresponding to nucleotide 23 of JS cp45, a C to T change at nucleotide 24, a G to T change at nucleotide 28, and a T to A change at nucleotide 45 of JS cp45; and [vi)] v) a mutation in an N gene start sequence comprising an A to T change at a position corresponding to nucleotide 62 of JS cp45.

C16

143. (Twice Amended) The immunogenic composition of claim 142, wherein said recombinant PIV genome or antigenome further incorporates [a full complement of attenuating mutations present in JS cp45, said full complement of] mutations comprising i) substitutions specifying a replacement of His for Tyr942, Phe for Leu992, and Ile for Thr1558 in the polymerase L protein; ii) substitutions specifying a replacement of Ala for Val96 and Ala for Ser389 in the N protein; iii) a substitution specifying a replacement of Thre for Ile96 in the C protein [(v)] iv) mutations in a 3' leader sequence comprising a T to C change at a position corresponding to nucleotide 23 of JS cp45, a C to T change at nucleotide 24, a G to T change at nucleotide 28, and a T to A change at nucleotide 45 of JS cp45; and [vi)] v) a mutation in an N gene start sequence comprising an A to T change at a position corresponding to nucleotide 62 of JS cp45.